

In the Abstract:

On page 17, please amend the current Abstract section as follows:

~~Hall Sensor Array for Measuring a Magnetic Field with Offset Compensation~~

ABSTRACT

A Hall sensor array for offset-compensated magnetic field measurement comprises a first (1A, 1B) and at least one additional pair (2A, 2B; 2A, 2B, 3A, 3B) of Hall sensor elements. Each Hall sensor element (1A, 1B; 2A, 2B; 1A, 1B, 2A, 2B, 3A, 3B) has four terminals (K1, K2, K3, K4), of which two a first and a third terminal (K1, K3) act as power supply terminals for supplying an operating current ( $I_{\text{operation}}$ ) and two a second and a fourth terminal (K2, K4) act as measurement terminals for measuring a Hall voltage ( $U_{\text{Hall}}$ ).

Respective first supply terminals of each Hall sensor element are connected together and to a first terminal of a common voltage source and respective second supply terminals of each Hall sensor element are connected together and to a second terminal of the common voltage source so that the common voltage source supplies an operating current for the Hall sensor elements. The Hall sensor elements (1A, 1B, 2A, 2B; 1A, 1B, 2A, 2B, 3A, 3B) are operated in the spinning current mode so that the offset voltages of the Hall sensor elements approximately cancel one another out in a revolution so that the Hall signal contributions which actually depend on the magnetic field remain so arranged that the current directions of the operating current ( $I_{\text{operation}}$ ) in the two Hall sensor elements of each pair are offset at an angle of approximately  $90^\circ$  to one another. The Hall sensor elements (2A, 2B; 2A, 2B, 3A, 3B) of the additional pair(s) are so arranged that their operating current directions are offset at an angle of approximately  $90^\circ/n$  to the operating current directions of the first pair (1A, 1B) of Hall sensor elements, n being the total number of Hall sensor element pairs and  $n \geq 2$ . The first terminals (K1), the third terminals (K3), the second terminals (K2) and the fourth terminals (K4) of the Hall sensor elements (1A, 1B, 2A, 2B; 1A, 1B, 2A, 2B, 3A, 3B) are respectively connected to each other electrically. The operating current ( $I_{\text{operation}}$ ) can thus be supplied over the first and third terminals (K1, K3) of all the Hall sensor elements and the Hall voltage ( $U_{\text{Hall}}$ ) can be measured over the second and fourth terminals (K2, K4) of all the Hall sensor elements (1A, 1B, 2A, 2B; 1A, 1B, 2A, 2B, 3A, 3B).